

FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS

PRESS RELEASE

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Fraunhofer IIS's awiloc® Technology for Positioning Makes EARTO Innovation Awards Final

Nuremberg/Brussels: October 15, 2015: The final judging for the Innovation Awards of the European Association of Research and Technology Organisations EARTO took place in Brussels on October 14. Among the six finalists was the Fraunhofer Institute for Integrated Circuits IIS. A group of Fraunhofer IIS scientists developed the awiloc® technology for secure positioning in wireless networks.



Jürgen Hupp of Fraunhofer IIS received the EARTO award for the localization technology awiloc®. From left to right: Jürgen Hupp, Fraunhofer IIS, Maria Khorsand, President EARTO, Carlos Moedas, European Commissioner for Research, Science and Innovation, European Commission. © EARTO | Press-quality full-color photo: www.iis.fraunhofer.de/pr.

The awiloc® technology received the second prize in the category Impact delivered. The EARTO Innovation Award of the European Association of Research and Technology

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Organisations is awarded to excellent research projects and innovations that are application-oriented and of high benefit to the society, both socially or economically.

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The awiloc® technology closes a gap

This technology, which has been certified to comply with data protection regulations, makes it possible to create navigation and information services (also known as location-based services) for use in buildings and urban spaces and offer them through mobile devices such as smartphones. The ideal complement to satellite-based navigation solutions, awiloc® is used in multimedia museum guides all over the world.

How to find the nearest subway station or shopping mall? Thanks to satellite navigation systems, this is not a difficult task: One quick search on an everyday smartphone or tablet, and the user is directed to their destination – as long as they are out in the open. If they are indoors or using public transit, this functionality beloved of motorists tends to fail: Signal loss means that positioning or navigation services are unavailable. The awiloc® technology closes this gap.

Led by Jürgen Hupp and Steffen Meyer, the Fraunhofer IIS team has been working on positioning technologies that use existing wireless networks such as Wi-Fi or Bluetooth LE to determine a user's position. The aim is to provide information services on smartphones, tablets and wearables. The user's mobile device determines its own position based on variations in the strength of signals it receives from networks in its vicinity. This method involves no data communication with, or connection to, a central server, which helps ensure that services based on awiloc® conform to data protection regulations. As well as positions, awiloc® determines speed, direction and orientation so that more precise information becomes available, for instance, to museumgoers, shoppers or responders to an emergency call.

Since 2008, users and developers participating in the awiloc® alliance have been collaborating to create complete solutions for positioning in public spaces and associated location-based services. High-profile users of applications based on awiloc® include the State Museum of Egyptian Art in Munich, Germany, and the Perot Museum in Dallas, Texas. The technology is available for licensing.

The EARTO Innovation Awards

EARTO has recognized outstanding achievements in applied research annually since 2009. An independent jury selects projects it believes have the potential to spark social or economic change.

The **Fraunhofer-Gesellschaft** is the leading organization for applied research in Europe. Its research activities are conducted by 66 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of nearly 24,000, who work with an annual research budget totaling more than 2 billion euros.

The **Fraunhofer Institute for Integrated Circuits IIS** is one of the world's leading application-oriented research institutions for microelectronic and IT system solutions and services. It ranks first among all Fraunhofer Institutes. With the creation of mp3 and the co-development of AAC, Fraunhofer IIS has reached worldwide recognition. In close cooperation with partners and clients the Institute provides research and development services in the following areas: Audio & Multimedia, Imaging Systems, Energy Management, IC Design and Design Automation, Communication Systems, Positioning, Medical Technology, Sensor Systems, Safety and Security Technology, Supply Chain Management and Non-destructive Testing. About 880 employees conduct contract research for industry, the service sector and public authorities. Founded in 1985 in Erlangen, Fraunhofer IIS has now 13 locations in 10 cities: Erlangen (headquarters), Nuremberg, Fürth, Dresden, further in Bamberg, Waischenfeld, Coburg, Würzburg, Ilmenau and Deggendorf. The budget of 120 million euros is mainly financed by projects. 23 percent of the budget is subsidized by federal and state funds.

Detailed information on: www.iis.fraunhofer.de/en